

## ABSTRACT

A method for enhancing the accuracy of PRK wherein a UV power meter is placed  
5 in the optical path of the laser beam. In one preferred embodiment, the power meter is  
placed distal to the last optical element so that any optical degradation that affects laser  
performance is taken into account. The meter consists of a UV-B cube and a pulnix  
camera with a software package. The meter is used to monitor the fluence of each laser  
pulse. The power meter is used to size each pulse and to quantify the energy in each pulse.

10 Sensing means is employed to measure intraoperative pulse-to-pulse energy during  
photorefractive keratectomy (PRK), using said data in conjunction with the location of the  
pulse within the ablation zone to determine the cumulative energy thus being achieved,  
and adjusting said laser to treat more or less at each point based upon the difference  
between the ideal cumulative energy map and the observed cumulative energy map  
15 derived from intraoperative power determination.